

ICS 65.020.01
CCS B 61

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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

LY/T 1881-2010

Embryo excision test for woody plants

木本植物种子离体胚测定技术

(English Translation)

Issued on: February 9, 2010

Implemented on: June 1, 2010

Issued by: State Forestry Administration

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Foreword

Appendix A of this standard is a normative appendix.

This standard is proposed and managed by the National Forest Seed Standardization Technical Committee.

This standard was drafted. Forestry Research Institute of Chinese Academy of Forestry.

Participated in the drafting of this standard. State Forestry Bureau and Seedling Work Station of the State Forestry Administration, Nanjing Forestry University, Yunnan Province, forestry seedlings work the terminus, the forest seedling station in Chifeng City, Inner Mongolia.

1 Scope

This standard specifies Appendix A, Table A. The technique for measuring the viability of 61 woody plant seeds isolated from 1 in vitro.

This standard applies to the test of seed viability of woody plant seed producers, operators and users.

2 Normative references

The terms in the following documents become the terms of this standard by reference to this standard. All dated references, followed by all Modifications (not including errata content) or revisions do not apply to this standard. However, parties to agreements based on this standard are encouraged to Whether the latest version of these files can be used.

For undated references, the latest edition applies to this standard.

GB 2772-1999 Forest seed inspection procedures GB 7908 forest tree seed quality classification

3 Terms and definitions

The following terms and definitions apply to this standard.

Techniques and methods for in vitro culture of embryos of plants by aseptic manipulation under artificially controlled environmental conditions.

The potential for germination of seeds and the vitality of embryos usually refers to the number of viable (ie, living) seeds in a batch of seeds.

The percentage of the total number of seeds.

4.1 Determination of samples

The assay requires 400 seeds of pure seed, 4 replicates, and 100 replicates per replicate. Sampling should be at least from the pure seeds after the clarity analysis 425 to 450 seeds were obtained so that there were enough seeds to compensate for the embryos that might be damaged during the exfoliation process.

4.2 Pretreatment

4.2.1

Remove hard skin or seed coat by mechanical or chemical means.

4.2.2

According to Appendix A, Table A. Soak the seeds in the conditions specified in 1 and change the water once every 24 hours. After soaking, disinfect with 30% hydrogen peroxide for 30min or disinfect with 2% sodium hypochlorite for 10 min, then rinse twice with water.

4.3 Embryo stripping

The test equipment and work surface should be disinfected. Exfoliate the embryo from the swollen seed with a scalpel or blade and place it in a culture vessel.

Wet filter paper, gauze or cotton wool should be kept moist throughout the operation. Note that the embryo should not be damaged during the stripping process and damaged during separation.

The injured embryo should be discarded and supplemented with excess seeds from the assay sample (4.1).

The empty granules, non-embryonic granules, rotted granules and pest worms found at the

time of peeling were counted as non-viable seeds.

4.4 Training

According to Appendix A, Table A. 1 specified culture conditions and culture time to culture the embryos, observe daily, and use embryos for secondary infections.

After the water is washed, it is returned to the vessel and the decayed embryos are sorted out.

If the test sample is severely infected by mold, a retest is required.